

Notice of Allowability

Application No.

10/043,812

Examiner

Ashok Patel

Applicant(s)

SEO ET AL.

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to IDS received on 08/15/2007.
2. ☒ The allowed claim(s) is/are 1-3 and 60-80.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date 081507
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

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1. The following is an examiner's statement of reasons for allowance: prior art of the record, including the IDS received on 08/15/2007, does not disclose or teach applicant's claimed light emitting device including an anode; a cathode; and an organic compound sandwiched between the anode and the cathode:

(1) wherein the organic compound film includes: a first layer having a first compound; a second made of the first compound and a second compounds, a third layer made of the second compound; wherein the first compound is a blocking compound capable of stopping the movement of holes or electrons, and wherein the second compound is at least one compound selected from the group consisting of: a hole injecting compound that receives holes from the anode; a hole transporting compound that has a hole mobility that is larger than its electron mobility; an electron transporting compound that has an electron mobility that is larger than its hole mobility; and an electron injecting compound that receives electrons from the cathode, wherein the electric current versus electric voltage property of the organic light emitting elements show a rectification property, as specifically recited in claim 1; or

(2) wherein the organic compound film includes a hole injecting compound that receives holes from the anode and a hole transporting compound that has a hole mobility that is larger

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than its electron mobility, wherein the organic compound film includes a region in which the hole injecting compound and the hole transporting compound are mixed, wherein the electric current versus electric voltage property of the organic light emitting elements show a rectification property, and wherein a concentration of the hole injection compound decreases continuously from the anode to the cathode, as specifically recited in claim 61; or

(3) wherein the organic compound film includes an electron transporting compound that has electron mobility larger than its hole mobility and an electron injecting compound that receives electrons from the cathode, wherein the organic compound film includes a region in which the electron transporting compound and the electron injecting compound are mixed, and wherein the electric current versus electric voltage property of the organic light emitting elements show a rectification property, as specifically recited in claim 65; or

(4) wherein the organic compound film includes: a first layer having a first compound; a second made of the first compound and a second compound, a third layer made of the second compound; wherein the first compound is a blocking compound capable of stopping the movement of holes or electrons, and wherein the second compound is at least one compound selected

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from the group consisting of: a hole injecting compound that receives hole from the anode; a electron transporting compound that has electron mobility larger than its hole mobility; an electron injecting compound that receives electrons from the cathode, wherein, a concentration change of the first and second compound in the second layer is continuous, as specifically recited in claim 69; or

(5) wherein the organic compound film includes a hole injecting compound that receives holes from the anode and a hole transporting compound that has a hole mobility that is larger than its electron mobility, wherein the organic compound film includes a region in which the hole injecting compound and the hole transporting compound are mixed, and wherein a concentration of the hole injection compound decreases continuously from the anode to the cathode, as specifically recited in claim 73; or

(6) wherein the organic compound film includes an electron transporting compound that has an electron mobility that is larger than its hole mobility and an electron injecting compound that receives electrons from the cathode; and wherein the organic compound film includes a region in which the electron transporting compound and electron injecting compound are mixed, as specifically recited in claim 77.

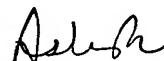
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2. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ashok Patel whose telephone number is 571-272-2456. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on 571-272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Ashok Patel
Primary Examiner
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